

### **REMARKS**

Applicant has carefully reviewed and considered the Final Office Action mailed on May 5, 2006, and the references cited therewith.

Claims 19, and 28-30 are amended, claims 12-18, 22, and 31-37 are canceled, claims 1-11, 23-27, and 38-41 are withdrawn, and no claims are added; as a result, claims 19-21, and 28-30 are now pending in this application.

### **Information Disclosure Statement**

Applicant respectfully requests that a copy of the 1449 Form, listing all references that were submitted with the Information Disclosure Statement filed with the application on November 26, 2003, marked as being considered and initialled by the Examiner, be returned with the next official communication.

### **§ 112 Rejection of the Claims**

Claims 29 and 30 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant respectfully traverses the rejection as follows.

Applicant has endeavoured to clarify that the light is being refracted twice by inserting “further” after “refracted” and before “by selected ones of the windows” in dependent claims 29 and 30. Applicant respectfully submits that amending dependent claims 29 and 30 as stated is supported by the specification of the present application as originally submitted. That is, the specification recites, “Lens 324 include a number of portions, having different refraction indices, a first refraction index for a first portion, a second refraction index for a second portion, and so forth, to enable collimated light rays 206a-206c to be emitted with the desired angles of deviation.” (Page 4, lines 28-31). In addition, the specification recites on page 4, lines 16-20:

the transparent windows (depending on the dispositions of the different portions of the sensor assembly 200) are either advantageously formed or coated with materials that provide the transparent windows with the

appropriate complementary refraction indices to refract collimated light rays 206a-206c emitted by light source 202 onto sensors 404a-204b.

As such, Applicant respectfully submits that dependent claims 29 and 30 do particularly point out and distinctly claim subject matter which Applicant regards as the invention. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 112 rejection of dependent claims 29 and 30.

*§ 103 Rejection of the Claims*

Claims 19-21 and 28 were rejected under 35 USC § 103(a) as being unpatentable over West (U.S. Patent No. 6,124,589) in view of Takagi (U.S. Patent No. 5,539,519). Applicant respectfully traverses the rejection as follows.

The West reference appears to describe, “An encoder for encoding light moving through a grating”. (Abstract). The Yakagi reference appears to describe an “optical displacement detecting device is comprised of a displacement member 2, a light source 4, a lens member 6, and a light receiving unit 8.” (Col. 2, 48-51). From the Applicant’s review, however, neither reference describes, teaches or suggests, either independently or in combination, that “a light source and a lens are located on a same side relative to a first window and a second window”.

In contrast, Applicant’s independent claim 19, as amended, recites:

refracting light, using a lens having two areas with different refraction indices, in a first direction and a second direction for sensing by a first and a second plurality of sensors after passing first windows of an encoder track and second windows of an index track respectively, wherein a light source and the lens are located on a same side relative to the first window and the second window;

In addition, independent claim 28, as amended, recites:

refracting light, using a lens having two areas with different refraction indices, in a first direction and a second direction for sensing by a first and a second plurality of sensors after passing first windows of an encoder track and second windows of an index track respectively, wherein a light source and the lens are located on a same side relative to the first windows and the second windows;

Applicant respectfully submits that amending dependent claims 29 and 30 as shown is supported by the specification of the present application as originally submitted. That is, the specification recites, "As illustrated, light source 202 includes light emitting diode (LED) 322 and lens 324." (Page 4, lines 27-28). Figure 3 of the present application shows light source 202 to have components 322 and 324, and, for example, Figures 1a-1c show the light source 202 to be on the opposite side of the code wheel 300 from sensors 204a-204b. In contrast, in Figure 3, West shows the light source 50 to be on the opposite side of the arced grating 46 (code wheel) from the lens 52, as do Figures 4-6. Similarly, Figures 1-3 of Takagi show the light source 4 to be on the opposite side of the encoder plate 2 (code wheel) from the lens 6.

As such, Applicant respectfully submits that the West and Takagi references do not teach or suggest each and every element and limitation of independent claims 19 and 28 as amended, either independently or in combination. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of independent claims 19 and 28, as well as those claims that depend therefrom.

**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney Gregg W. Wisdom at (360) 212-8052.

At any time during the pendency of this application, please charge any additional fees or credit overpayment to the Deposit Account No. 08-2025.

**CERTIFICATE UNDER 37 CFR §1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS AF Commissioner for Patents, P.O. BOX 1450 Alexandria, VA 22313-1450, on this 28<sup>th</sup> day of June, 2006.

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